

Chapter Five

Infant and Toddler Nutrition



Infants' and toddlers' vitality and successful development depends on good nutrition. When infants are fed the appropriate types and amounts of foods, their health is promoted. Feeding, however, is much more complex than simply offering nutritious food and serves purposes far beyond physical growth. Responding consistently to infants hunger and satiety cues help them develop all-important trust and attachment. Recognizing and responding appropriately to each new developmental period helps build confidence and can improve progress through that period. This chapter reviews nutrition and feeding topics you may be called upon to address for infants and toddlers. Several excellent references can be found in the resource section of this manual.

Infancy is a period marked by the most rapid physical growth and development in a person's life. The energy and nutrients required to support these processes are phenomenal. Infants must consume appropriate quantities and types of foods to acquire the needed nutrients. The significant developmental changes of the first year have a profound effect on the way infants feed. Newborns are able to suck to receive their milk. At about 4 to 6 months of age infants may be able to eat soft mashed foods. Over the next months they will learn to chew, swallow, drink from a cup, and ultimately feed themselves. As infants mature, their food and feeding patterns must continually change. Caregivers may need the help of the health consultant to plan for the food needs of the infants in care.

Infant Feeding

Feeding is not only a time to provide nutrients for infants, but a time that is crucial to the development of healthy relationships between infants and caregivers. Responsiveness to an infant's cues of hunger and satiation and the close physical contact during feeding help facilitate healthy social and emotional development. Refer to the NCAST materials and Chapter 2 of this manual for information about feeding cues. Remind caregivers that they can help babies develop trust with feeding and eating interactions in the following ways:

1. Respond quickly to the infant's cues.
2. Feed infants when they are hungry – not with an imposed schedule.
3. Stop feedings when infants signal they are finished.
4. Make eye contact as desired/comfortable for the infant.
5. When bottle feeding, hold, cuddle, and pay attention to the infant.
6. When spoon-feeding, sit in front of the infant and interact verbally and visually.
7. When possible, eat with infants, to serve as a model of adult eating.

Full-term infants fed on demand usually consume the amount of food they need to grow well. Caregivers need to remember that their responsibility during feeding is to provide appropriate foods in a safe, nurturing environment and pay close attention to infant's cues. It is the infant's responsibility to decide when and how much to eat.

Breastfeeding in Child Care

Research shows that human milk, with its unique combination of fatty acids, lactose, amino acids, vitamins, minerals, enzymes, and maternal antibodies is the ideal food to nourish infants and protect them from illness. Exclusive breast-feeding is recommended for the first six months as is continued breast-feeding throughout the first year and as long as mutually desired. Many mothers abandon breastfeeding earlier than is recommended due to lack of knowledgeable support. Infant care providers are in a unique position to promote breast-feeding, and their support is essential for mothers to continue breast-feeding after their infants enter child care. The Academy of Pediatrics, the U.S. Department of Agriculture, and the Healthy Mothers Healthy Babies Coalition have developed resources for families and child care providers that address breastfeeding specifically in child care. These resources can be found in the appendix of this manual. The health consultant has an excellent opportunity to encourage and support the child care provider in increasing the length of time mothers breast-feed their infants as follows:

1. Provide information about how breastfeeding benefits infants, mothers, and caregivers.
2. Discuss with staff ways that they can let families know that “Breast-fed Infants are Welcome Here!”
3. Provide consultation and training to ensure that infant care providers understand breast-feeding basics such as keeping up milk supply, managing growth spurts, positioning to prevent or help sore nipples, and expressing and storing breast milk.
4. Help child care programs develop infant feeding policies that include information about handling breast milk.
5. Explore strategies to support mothers such as providing a comfortable place for mothers to nurse and working with mothers on timing of feedings.
6. Identify other support systems in the community that can be of help to mothers who want to continue to breast-feed when their children attend child care.

Formula

Questions sometimes arise among infant caregivers about the variety of infant formulas available. Commercial milk-based formula that is iron-fortified is most commonly recommended for infants who are not breast-fed. Soy-based iron fortified infant formulas are also commonly used and nutritionally adequate for full-term infants. There are numerous milk and soy based formulas on the market, and it is helpful for the child care health consultant to be familiar with all brands. Some infants may need specialized infant formulas due to allergy or medical needs. Child care providers may turn to the CCHC for guidance when families provide or request alternative formulas. You can assist them to ensure that infants are receiving proper nutrition by consulting with a Registered Dietitian and the infant’s health care provider.

It is critical to infant’s health and nutrition that infant formulas are diluted and mixed properly. The health consultant can ensure that caregivers know how to mix both powdered and concentrated formula correctly and encourage them to share this information with parents.

Cow's Milk

The American Academy of Pediatrics, Committee on Nutrition recommends that whole and low-fat cow milk not be fed to infants. Cow’s milk is difficult for infant’s immature kidneys to process because of concentrated amounts of protein, sodium, potassium, and chloride. Research also indicates that it is difficult for infants to get adequate nutrients when cow’s milk is provided. Low-fat and skim milks are dangerous for infants due to insufficient quantities of fats and calories, and an even higher amount of protein and minerals places more stress on immature kidneys.

Providers and consultants may encounter families feeding their infants goat's milk or home prepared goat's milk formulas. Goat's milk is not recommended for infants under one year of age. As with cow's milk, goat's milk has a high protein content and can cause damage to infant's immature kidneys. Goat's milk also has low levels of folic acid and vitamins B12, C, and D. See Appendix G for more information and references.

Goat's Milk

Infants with special needs often have feeding challenges. Resources are available to support parents and caregivers. Consult a Registered Dietitian and the infant's health care provider to help develop a written plan for feeding.

Special Needs Feeding

The handout, "Infant Development Feeding Guidelines," included in Appendix G, summarizes the appropriate types of food to offer based on typical development of infants. When and how to introduce solids should also take into consideration the infant's nutritional status, medical conditions, and cultural, ethnic and religious food preferences of the family. It is therefore recommended that families along with the infant's health care providers make decisions about when and which solids to introduce. In order to eat solid foods safely, infants should be able to hold their head steady when sitting with support. The health consultant is in the position to discuss with families their desires for introduction of solid foods and provide some guidance. Also, this is a good time to remind caregivers and parents that if the infant does not seem to like a new food, she should not be forced to eat it. Until an infant is eating a variety of table foods (somewhere around 9 months to a year) breast-milk and/or infant formula continues to be the infant's main source of nutrition and should not be replaced with solid foods or juice. Another reminder for parents and caregivers is to avoid offering infant's under 6 months of age spinach, beets, turnips, carrots, or collard greens because they may contain too much nitrite, which can cause a condition called methemoglobinemia.

Adding Solids

The risk of foodborne illnesses exists while preparing bottles and infant food just as it does for full meal preparation for older children. Because of infant's immature immune systems, it is important to take extra care with the preparation and storage of infant foods. Because families often provide foods for infants in child care, your efforts related to food safety need to be directed to both families and staff. The handouts included in Appendix G should help you in these efforts.

Safe Handling of Infant Food and Bottles



Supporting Toddler Eaters

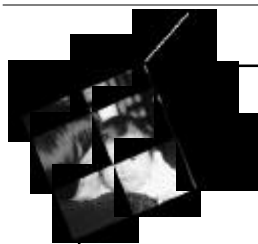
During toddlerhood, good nutrition and appropriate feeding practices continues to be important to physical and emotional health. When nutritious, developmentally appropriate foods are provided in a supportive environment, children can thrive. A child's birth weight quadruples by age two, but the rate of growth begins to slow in the second year of life. As the child's growth rate begins to decline, their appetite decreases and the amount of food consumed may become unpredictable. Research shows that trusting the child to eat the amount of food they need works to keep growth on track. For toddlers to do their job of deciding how much to eat, they need a structured but pleasant meal time environment, with adults offering a variety of nutritious foods (not low nutrient junk foods) and eating with them to serve as role models. The health consultant can re-enforce to caregivers the importance of maintaining a "Division of Responsibility in Feeding" and setting a good example by eating nutritious foods with toddlers.

Remember to remind care providers that toddlers should continue to drink whole milk until age 2, and that milk intake should not exceed 24 ounces per day. Drinking too much milk at a time when the appetite is slowing often interferes with food and nutrient intake. Parents should be encouraged to wean bottle fed toddlers to a cup. Juice intake should also be limited. Young children who drink more than 6-8 ounces of juice per day can be at risk for poor growth, nutrient deficiencies, and early childhood caries. Encourage offering fruit instead of juice, and milk or water to drink.

Prevent Choking

Choking on food is a potentially serious problem in toddler care. Toddlers do not have enough muscle control to thoroughly chew and swallow foods. Foods that are small or slippery, such as peanuts, candy, or hot dogs, can slip down a child's throat or airway before he has a chance to chew them. Foods that are dry and hard to chew, such as popcorn and nuts might be swallowed whole or inhaled into the airway. Sticky foods such as peanut butter and processed cheese can get lodged in a child's throat. The health consultant can offer to review menus for potential choking hazards and provide caregivers and parents with information on preventing choking on foods. See Appendix G for more information.





Caregiver Tip

Supporting Toddler Eaters

Around the middle of the second year of life, feeding can become more of a challenge. Toddler development at this age focuses on asserting independence at the same time that growth rate slows and calorie needs decrease. Mealtimes can be the place where toddlers' needs and those of caregivers can clash. Reminders to child care staff about typical toddler eating behavior can be reassuring:

1. Toddlers often do not like new foods – They will usually learn to enjoy them with loving support and patience of caregivers and many opportunities to see them, refuse them, taste them and spit them out, and finally swallow them.
2. Toddlers are erratic – Some days they eat a lot, other days they eat hardly anything. What they like one day, may be refused the next.
3. Toddlers can be opinionated – About food and about what they will and won't do (including eating).

Just as with infant feeding, caregivers need to remember to maintain a "division of responsibility" with feeding toddlers. Adults (caregivers and families) are responsible for:

1. Selecting and buying food;
2. Making and presenting meals, and establishing regular meals and snack schedules;
3. Presenting food in a form that toddlers can handle safely;
4. Allowing eating methods toddlers can master (i.e., finger feeding);
5. Maintaining standards of behavior at the table while letting the toddler explore food by looking, feeling, mashing, and smelling.

The toddler is responsible for deciding whether to eat, how much to eat, and which foods to choose to eat from those served.

These recommendations are adapted from materials developed by the Child Care Health Program, Public Health of Seattle and King County and nutritionist Ellyn Satter. An excellent resource for practical and sound advice about infant/toddler feeding are books, videos and nutrition fact sheets produced by Ellyn Satter Associates. See Appendix G for more information.

Incorporating this Chapter into Your Practice

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- Contact WIC program for information.
- Observe during feeding times at the centers in your practice.
- Offer to have a nutritionist evaluate cycle menus.
- Provide information about food safety.
- Share ideas for parents who pack meals or snacks for their infants and toddlers.



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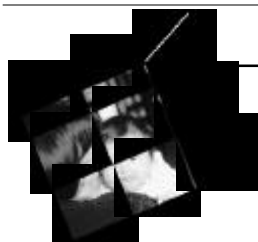
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